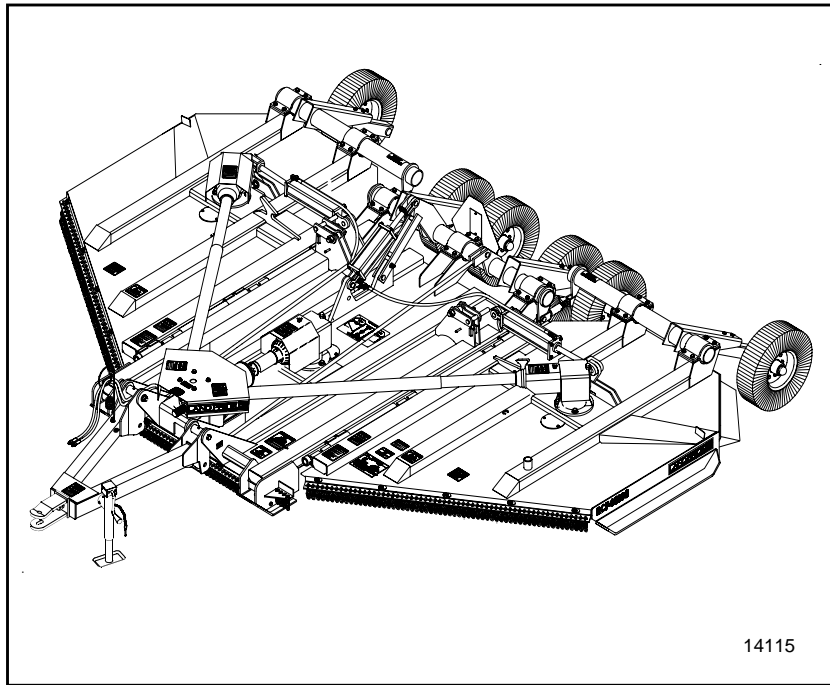


Operator's Manual

RC45180 & RCM45180
Rotary Cutter



Read the Operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!



14115

Cover illustration may show optional equipment not supplied with standard unit.

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Printed in the United States of America.

Important Safety Information**Important Safety Information**

For your safety and to develop a better understanding of your equipment, thoroughly read the Operator's Sections of this manual before operation.

Safety Notations

The SAFETY ALERT SYMBOL indicates that there is a potential hazard to personal safety involved and extra safety precautions must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment; hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Watch for the following Safety Notations throughout your Operator's Manual:

**DANGER!**

*Indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury. This signal word is limited to the most extreme situations.*

**WARNING!**

*Indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.*

**CAUTION!**

*Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices*

Safety Rules

These rules and instructions must be reviewed at least annually by all operators!

Most accidents are the result of negligence and carelessness, usually caused by failure of the operator to follow safety precautions. The following precautions are mandatory to prevent such accidents. Your implement has been designed with built-in safety features.

Make sure everyone that uses this machine has read the Operator's Manual and understands how to operate it safely.

This Operator's Manual is considered a part of the implement and should remain so when loaned or sold.

Important Safety Information

General

1. **Do not** allow anyone to operate this machine who has not been properly trained in its safe operation.
2. To prevent personal injury caused by thrown objects, the use of front and rear safety shields is strongly recommended.
3. **Do not** let children operate the cutter.
4. **Never** allow passengers.
5. **Never** operate the cutter near people and **do not** stand near the cutter while blades are in motion.
6. Before cutting, clear the area of objects and debris that could become entangled in the blades or thrown from the cutter.
7. After striking an object, disengage PTO, shut off tractor and inspect for damage before continuing.
8. **Do not** operate the cutter in reverse unless necessary. Debris may be thrown from the front of the cutter; therefore, increasing the risk of injury to the operator.
9. Check the cutter periodically for loose hardware and tighten if necessary.
10. Travel slowly over rough terrain and be alert to holes and gullies.
11. When traveling on public roads, use accessory lights and devices for adequate warning to operators of other vehicles. Comply with all Federal, State, and Local laws.
12. **Never** operate the cutter while in the raised transport position.
13. Be alert to traffic when crossing or cutting near roadways.
14. Disengage the PTO when raised for transport or backing up.
15. Wear proper eye protection to prevent injury from flying objects.
16. Keep PTO shielding in place and in good condition. **do not** operate cutter with shields missing.
17. Always use proper PTO speed or machine damage may result. This cutter is designed to be used with a tractor using a 540 or 1,000 rpm rear PTO. **Important:** Never should a machine equipped for 540 rpm PTO be operated by a tractor equipped with a 1,000 rpm PTO nor should a 1,000 rpm PTO machine be operated with a tractor equipped with a 540 rpm PTO.
18. In order to maintain steering control, add ballast to tractor. To determine the amount of ballast required refer to your tractor operator's manual.
19. Before performing maintenance, disconnect PTO driveline and hydraulic hoses and securely block cutter on safe supporting stands. **Do not** position stands under axle or wheel supports.
20. Transport cutter with transport axle lock pin installed and wing lock latches in place.
21. Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin. Check all hydraulic hoses before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this type of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.

22. **Do not** permit anyone to stand between tractor and cutter - especially during tractor hook-up.
23. Purge air from hydraulic system before attempting to raise or lower wings.
24. Stand clear of wings when raising or lowering.

Transporting

1. Be alert to traffic when crossing or operating near roadways. Always maintain complete control of the machine. Know your state and local laws concerning highway safety and regulations. Comply with these laws when transporting machinery.
2. Do not exceed 15 mph when transporting. Transport only with a farm tractor of sufficient size and horse power. See "Tractor Requirements" Section I, PAGE 8.
3. Always make sure flashing safety lights, slow moving vehicle emblem, and reflectors are in place and visible prior to transporting the machine on public roads, when required.
4. Do not transport at night or during other periods of poor visibility.

Tire Handling & Repair

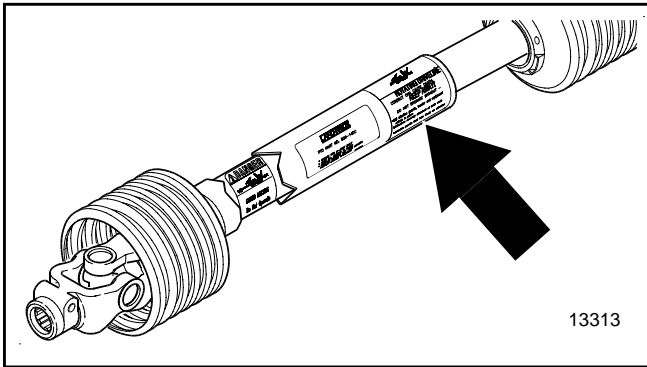
1. Tire changing can be dangerous and should be performed by trained personnel using the correct tools and equipment.
2. Do not re-inflate a tire that has been run flat or seriously under inflated. Have it checked by qualified personnel.
3. When removing and installing wheels, use wheel handling equipment adequate for the weight involved.

Important Safety Information

Safety Labels

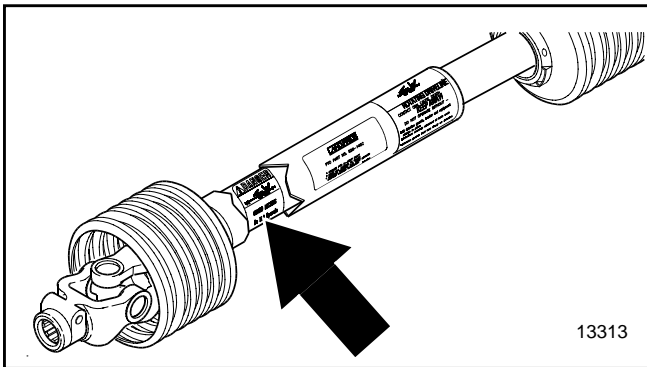
1. Your implement comes equipped with all safety labels in place. They were designed to help you safely operate your implement. Read and follow their directions.
2. Keep all safety labels clean and legible.
3. Replace all damaged or missing labels. To order new labels go to your Land Pride Dealer.

4. Refer to this section for proper label placement. To install new labels:
 - a. Clean the area the label is to be placed
 - b. Peel backing from label. Press firmly on surface being careful not to cause air bubbles under label.



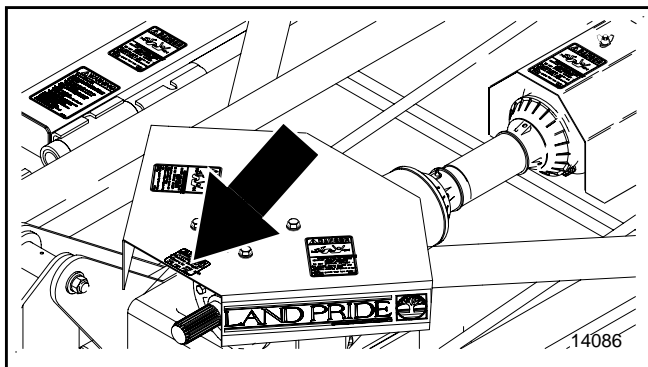
818-552C

Danger! Rotating Driveline Entanglement Hazard



818-540C

Danger! Shield Missing - DO NOT Operate



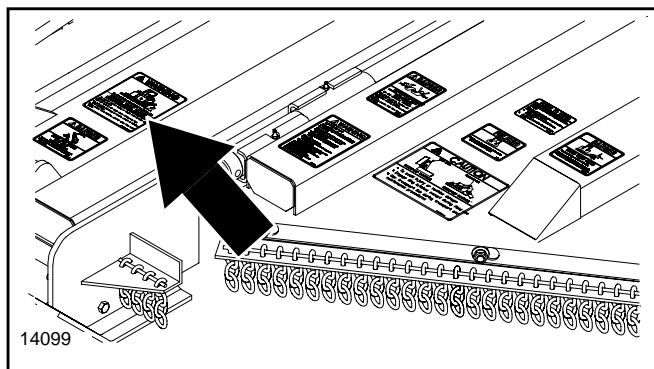
818-130C

Caution! Use 540 rpm PTO only

818-240C

Caution! Use 1000 rpm PTO only

Important Safety Information



⚠ WARNING

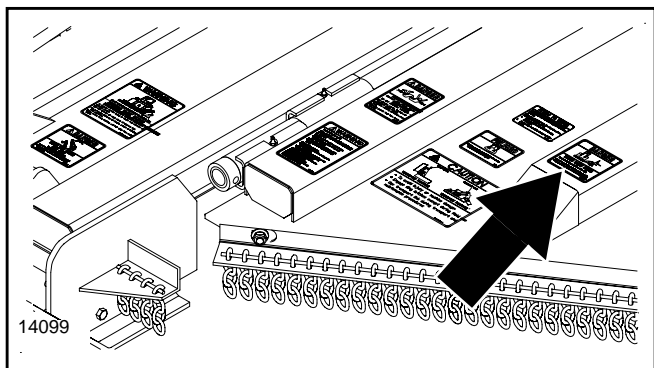
DO NOT EXCEED
ROTATING BLADE HAZARD
TRACTOR MUST HAVE SAFETY GUARDING
To prevent serious injury or death from contact with rotating blades:

- Do not exceed 45 degrees of wing angles (up) unless tractor is equipped with suitable safety guarding
- Do not point discharge at people, animals or buildings when operating

Keep hands, feet, clothing and hair away from moving parts

818-276C Rev. A

818-276C
Warning! Rotating
Blade Hazard



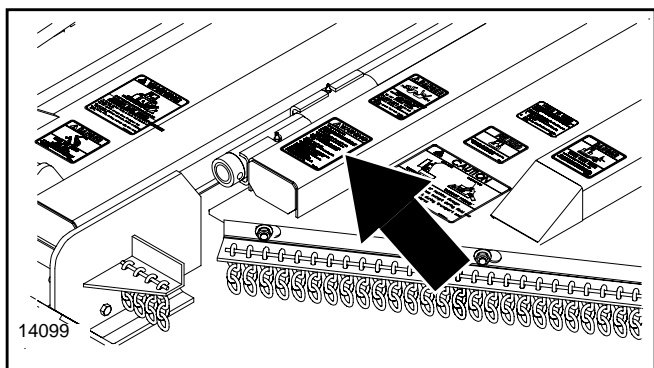
⚠ DANGER

THROWN OBJECT HAZARD
To prevent serious injury or death from thrown object:

- Operate only with all guards installed and in good condition.
- Stop operation if bystanders come within several hundred feet.

818-556C

818-556C
Danger! Thrown
Object Hazard



⚠ WARNING

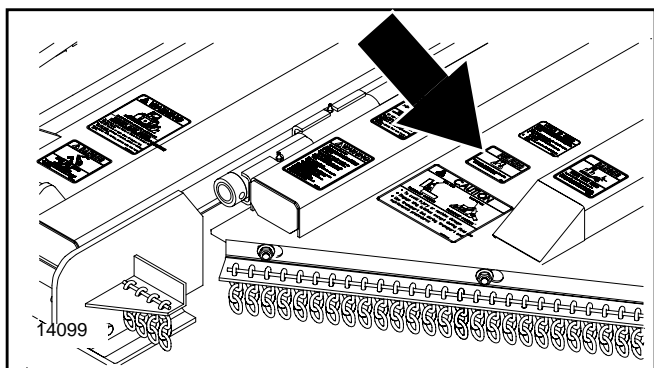
To prevent serious injury or death:

- Read and understand Operator's Manual before using. Review annually.
- Do not permit riders on the tractor or mower. Never carry children on tractor seat.
- Do not allow children to operate mower.
- Operate only with guards installed and in good condition.
- Keep away from moving parts.
- Operate only with tractor equipped with ROPS and seatbelts.
- Before mowing, clear debris from mowing area.
- Do not operate in the raised position.
- Stop engine, set brake and wait for all moving parts to stop before dismounting.
- Support mower securely before working beneath unit.
- Transport with clear reflections, DMV and working lights as required by Federal, state, and local laws.

Si no lee ingles, pide ayuda a alguien que si lo lee para que le traduzca las medidas de seguridad.

818-554C

818-554C
Warning! General Safety
Information



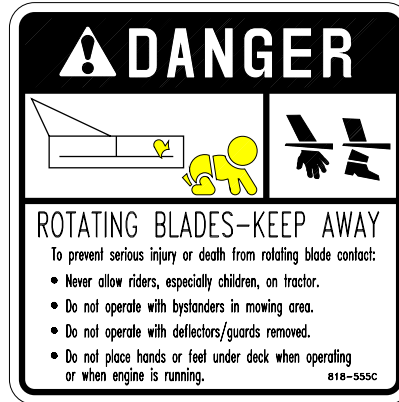
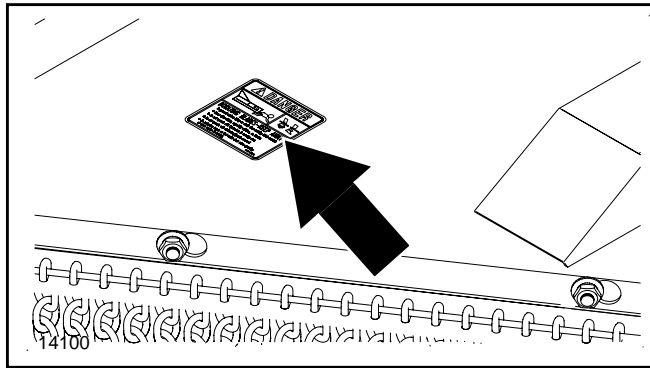
⚠ PELIGRO

- Si No Lee Ingles, Pida Ayuda a Alguien Que Si Lo Lea Para Que le Traduzca las Medidas de Seguridad.

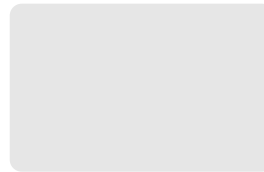
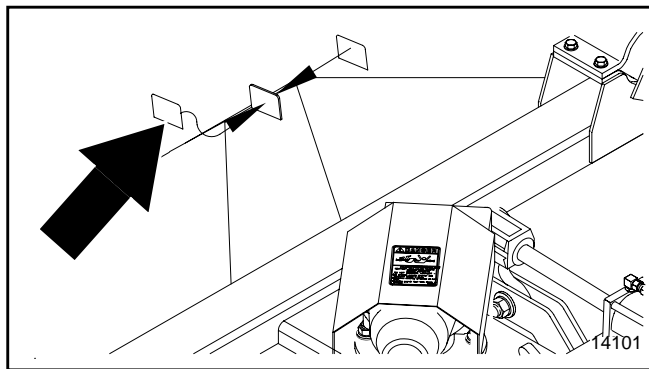
818-557C Rev. A

818-557C
Notice To Owner

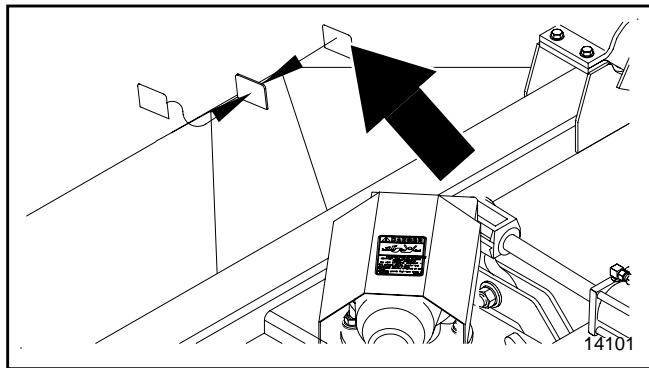
Important Safety Information



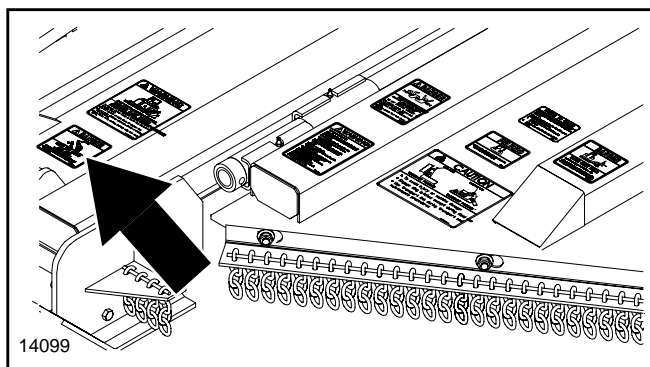
818-555C
Danger! Rotating Blade Hazard



818-229C
Amber Reflector

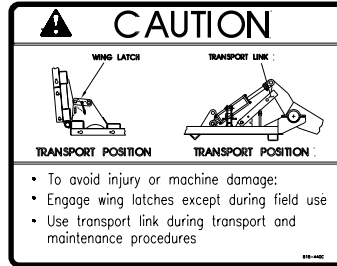
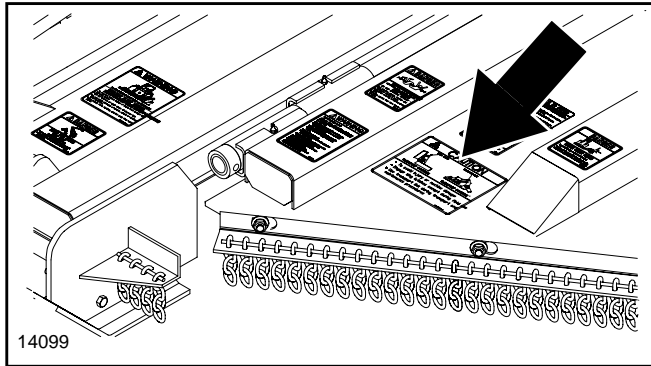


818-230C
Red Reflector



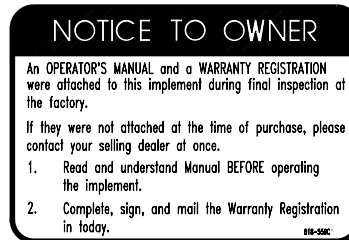
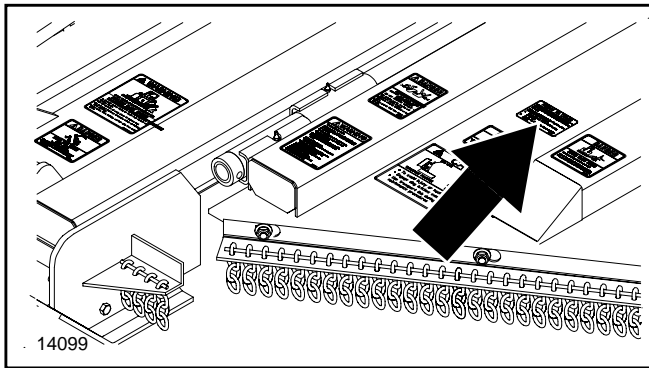
818-561C
Warning! Moving Parts Hazard

Important Safety Information



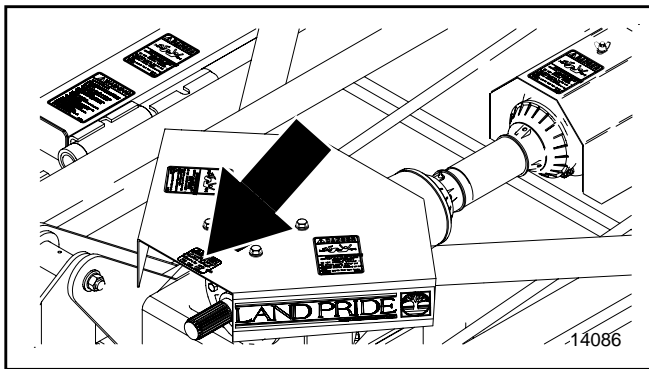
818-440C

Caution! Wing latches & transport link information.



818-559C

Notice To Owner



818-240C

Caution! Use 1000 rpm PTO only

Introduction**Introduction****Using This Manual**

This Operator's Section is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The warranty sheet should be filled out by the owner and dealer at the time of purchase. After completion give the dealer the white copy and send the pink copy to Great Plains. Keep your copy in the manual for use when corresponding with the dealer.

To order a new Operator or Parts Manual contact your authorized dealer or write to the address listed below in the "Owner Assistance" paragraph. Include the model and serial numbers of your unit.

The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.

Terminology:

"Right " or "Left" as used in this manual is determined by facing the direction the machine will travel while in use unless otherwise stated.

Definitions:

NOTE: A special point of information related to it's preceding topic. The author's intention is that you read and note this information before continuing.

IMPORTANT: Information, related to it's proceeding topic, that the author feels would be of use.

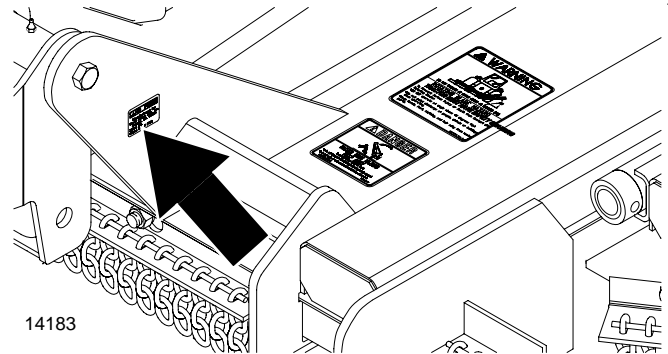
Owner Assistance

If customer service or repair parts are required contact your local Land Pride Dealer. He has trained personnel, repair parts, and the equipment needed to service your implement.

These parts have been specially designed and should only be replaced with genuine Land Pride parts.

Serial Number Plate

Refer to the following illustration for the location of your serial number plate.



Serial Number Plate Location

Figure 1

For prompt service always use the serial number and model number when ordering parts from your Land Pride Dealer. Be sure to include your serial and model numbers in correspondence also.

Your dealer wants you to be satisfied with your new machine. If for any reason you are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your dealership Service Manager make sure he is aware of any problems you may have and that he has had the opportunity to assist you.
2. If you are still not satisfied, seek out the Owner or General Manager of the dealership, explain the problem and request assistance.
3. For further assistance write to:

Customer Service

Great Plains Mfg. Inc.
P.O. Box 245
Assaria, Ks. 67416

Section 1 Assembly and Setup

Section 1 Assembly and Setup

Tractor Requirements

This cutter is designed for tractors with a minimum PTO horsepower rating of 50 HP and maximum of 150 HP.

CAUTION!

Do not over speed PTO or machine damage may result. This cutter is designed to be used with a tractor using a 540 or 1,000 rpm rear PTO but not both.

Specifically, each cutter is equipped for only one mode of operation. **Do not** attempt to operate a 540 PTO cutter with a 1,000 RPM PTO tractor. **Do not** operate a 1000 RPM PTO cutter with a 540 PTO tractor. Note that many tractors provide both 540 and 1,000 RPM PTO modes. Check your tractors manual to determine your exact configuration.

Before You Start

Read and understand the owners manual for your cutter. A basic understanding of how it works will aid in the assembly and setup of your cutter.

Before attempting to assemble the cutter use the following as a check list. Having all the needed parts and equipment readily at hand will speed up your assembly task and will make the job as safe as possible.

Check for fasteners and pins that were shipped with the cutter. **Note:** All hardware coming from the factory has been installed in the location where it will be used. If a part or fastener is temporarily removed for assembly reasons, remember where it goes. Keep the parts separated.

If a pin, bolt or other part has been removed, and you are unsure where it is used, use the parts section to identify it. Be sure the part gets used in the correct location. By double checking while you assemble, you will decrease the chance of using a bolt incorrectly that may be needed later.

Have a fork lift or loader along with chains and safety stands that are sized for the job ready for the assembly task.

Have a minimum of 2 people at hand while assembling the cutter.

Check to see all nuts are tightened. See “**Torque Values Chart**” page 24 for additional torque specifications.

Dealer Cutter

Assembly & Preparations

This cutter has been partially assembled at the factory. The hitch & both wing axles will need to be assembled.

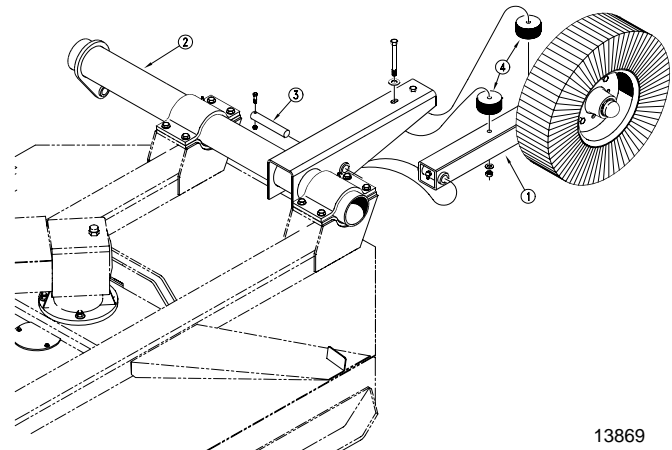
Left & Right Wing Axle Assembly

NOTE: Hardware bag should be banded to unit.

Refer to Figure 1-1:

1. Assemble axle tube arm assembly (#1) with tire to wing axle (#2), using axle mount pin (#3) with hardware. Install rubber bumpers (#4) with hardware.
2. Grease points marked by arrows as noted in "Main tenance & Lubrication" section page 19.

NOTE: Make sure nuts & bolts are tight.



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Wing Axle Assembly

Figure 1-1

Hitch Assembly

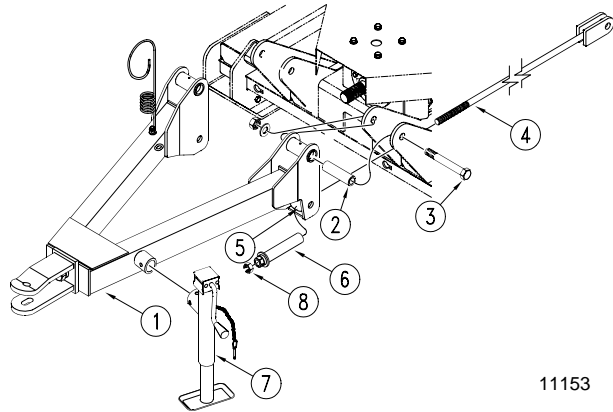
Refer to Figure 1-2:

NOTE: **Do not** tighten hardware until assembly is complete.

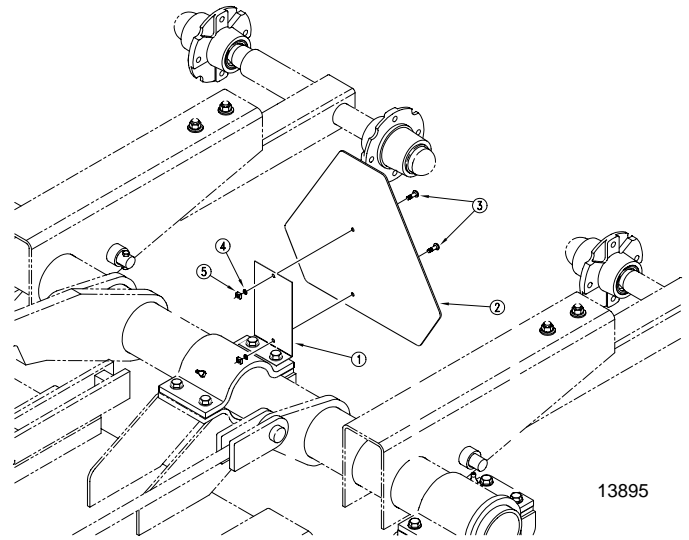
1. Insert main hitch rear mount bushings (#2) into hitch pivot. Install the main hitch (#1) to the forward hitch plates. Secure with 1" x 8" hex bolt (#3) and 1" flat washers and Nylock nut. Nut should be located toward the inside as shown.
2. Install both leveling rods (#4) through the respective trunnion pivot of the hitch. Secure the leveling rod to the hitch with the leveling tube weldment (#6) and a 7/8" hex nut (#8). **Note:** The leveling tube weldment should be screwed onto the leveling rod about 3" as a preliminary adjustment. Final adjustment should not be made until the cutter is attached to the tractor.

Section 1 Assembly and Setup

3. Install screw jack (#7) to hitch and secure with attached pin. Adjust jack until center deck is approximately horizontal.



**Hitch Assembly Illustration
Figure 1-2**



**Slow Moving Vehicle Assembly
Figure 1-3**

**Slow Moving Vehicle
Bundle Assembly**

Refer to Figure 1-3:

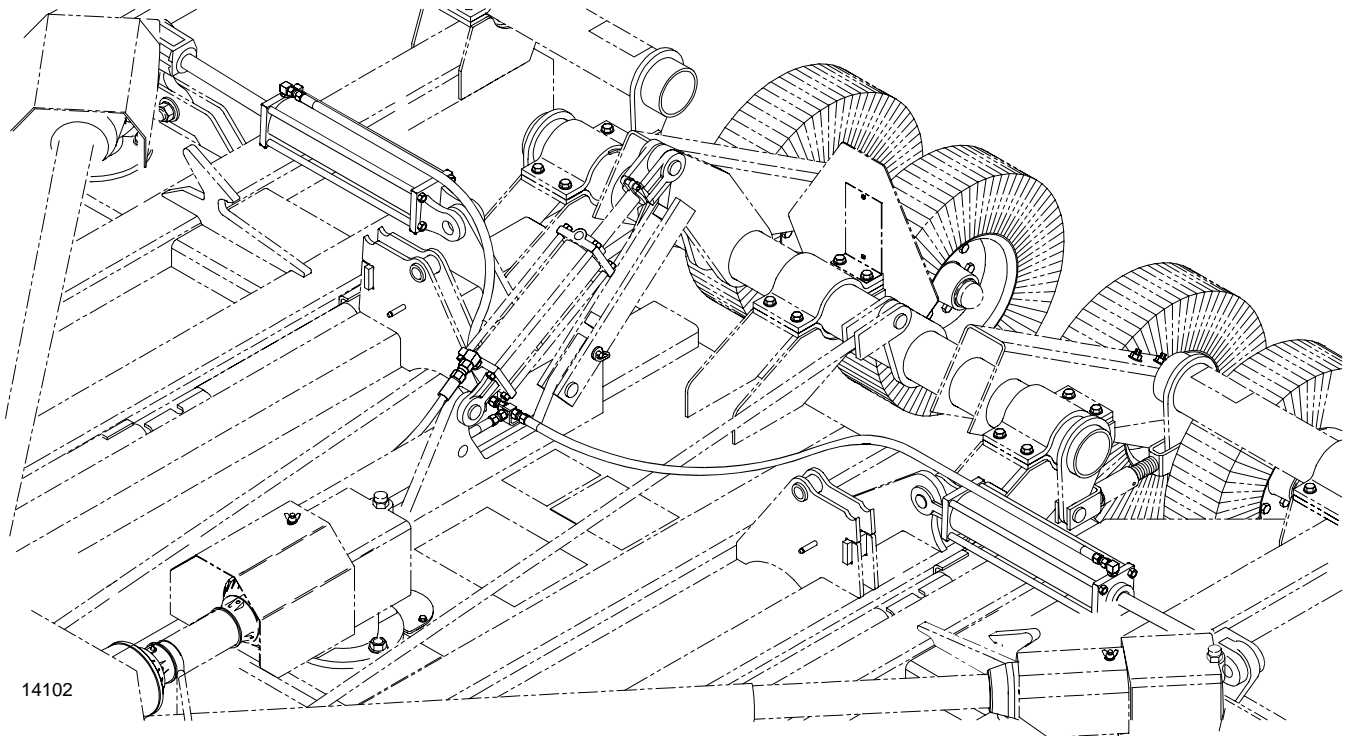
Install bracket (#1) with hardware shown to bearing cap. Then install Slow Moving Vehicle (#2) to bracket (#1) by using screw 1/4" x 5/8" Long (#3) with square nut (#5) and lock washer (#4).

Hydraulic Plumbing

Refer to Figure 1-4:

The standard cutter is equipped with hydraulic cylinders for each wing to provide simultaneous folding.

An optional hydraulic lift adjustment kit is also available from your Dealer.



**Hydraulic Plumbing
Figure 1-4**

Section 1 Assembly and Setup

NOTE: Each pair of outlets on your tractor can only operate one remote cylinder. All three cylinders on the cutter are single action (one-way) type cylinders and should not be plumbed for two-way operation.

Your Dealer will be able to help you determine the best configuration to match your tractor.

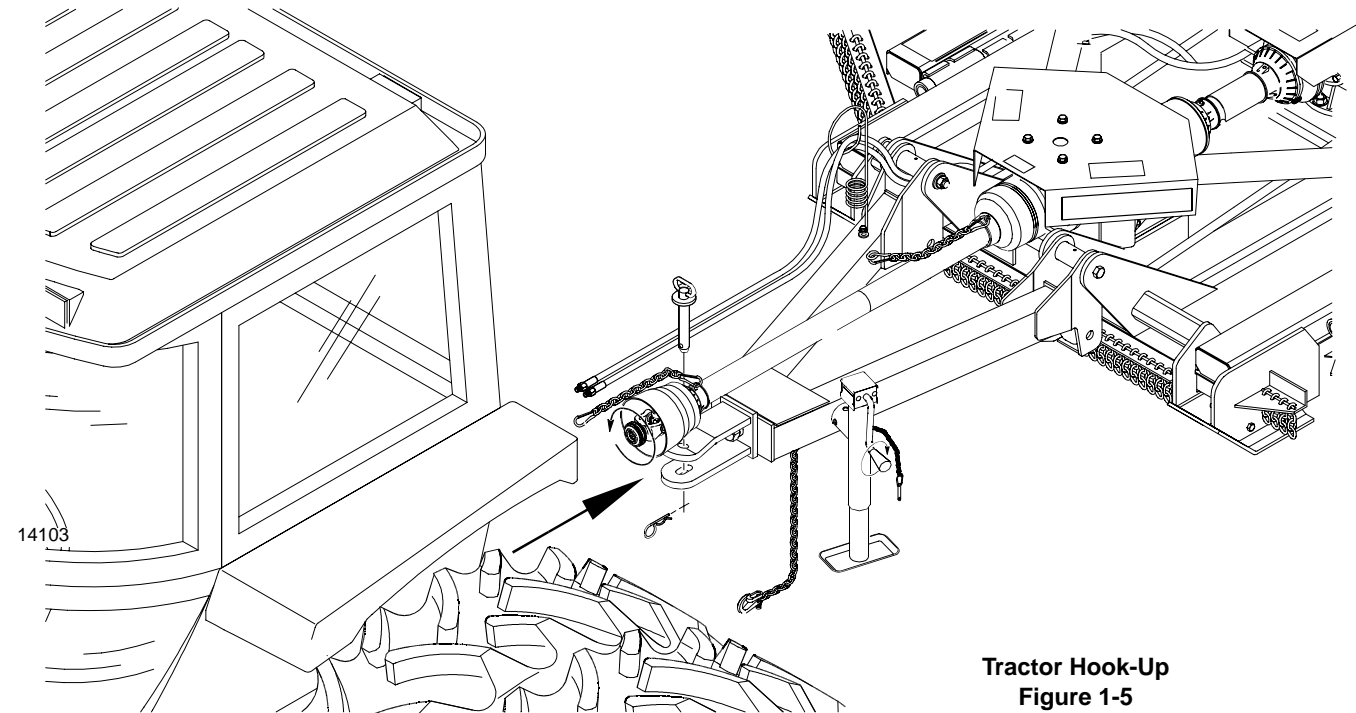
Tractor Hookup

Refer to Figure 1-5:

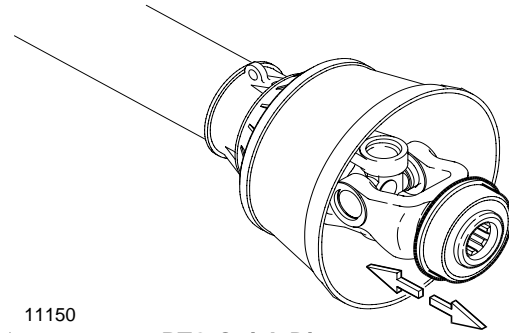
1. Back the tractor up to the tongue until holes in drawbar and cutter hitch are aligned. Raise or lower tongue jack to correct height.
2. Attach cutter with 1" hitch pin and secure with lock pin. Always use a pin that contains a safety locking device to prevent it from falling out.
3. Lower tongue jack until weight of cutter is fully removed from jack, then remove the jack. Store the jack on the left hand wing deck. A storage base is located near the front edge of the wing.
4. Attach safety chain on tongue hitch to tractor. Adjust chain length to remove all slack except what is necessary to permit turning of the cutter. Lock hook securely on chain.

Refer to Figure 1-6:

5. The PTO shaft from the tractor may be a constant velocity type or conventional. Attach the 1 3/4-20 splined end to the input side of the power divider gearbox. Attach end with the quick disconnect to the tractor.



Tractor Hook-Up
Figure 1-5



PTO Quick Disconnect
Figure 1-6

NOTE: The PTO quick disconnect consists of a graphite reinforced, round sleeve that must be rotated about its own axis to engage/disengage the shaft.

6. Secure chain on PTO around cutter tongue to restrict outer shield of PTO from rotating.

NOTE: Two small chains are supplied with each PTO. These chains must be attached to the outer shields of each PTO shield and to an anchor ring on the cutter deck or hitch

7. PTO should now be moved back and forth to insure that it is secured on the shaft of the tractor and power divider input shaft on the cutter.
8. Should the PTO shaft require shortening:
 - a. Hold the half shafts next to each other in the shortest working position and mark them.

Section 1 Assembly and Setup

- b. Shorten inner and outer guard tubes equally.
 - c. Shorten inner and outer sliding profiles by the same length as the guard tubes.
 - d. Proper overlap is a minimum of one-half the length of each tube, with both tubes being of equal length.
 - e. Round off all sharp edges and remove burrs. Grease sliding profiles.
9. Route cylinder hoses through hose support loop and connect to tractor remote outlets. Refer to "**Hydraulic Plumbing**" on page 9 for proper hookup. If the tractor being used does not have three pair of supply outlets, an optional control valve kit is available from your dealer.
10. Cycle the hydraulic system by raising and lowering the center deck cylinder and the wing fold cylinders. If operation is sluggish, it may be necessary to purge the system of trapped air.
- a. With the wings lowered to the ground, loosen the hydraulic hose fitting at each wing cylinder slightly to allow fluid to escape.
 - b. Slowly activate the tractor control valve to purge any trapped air from the system.
 - c. Tighten each fitting.
- The optional center deck lift cylinder is purged in the same manner. The cutter should be lowered to the ground or the cylinder fully retracted before loosening the hose fitting (as described above).
11. The PTO Constant Velocity shaft or conventional PTO (if used) should be checked for adequate clearance under all ranges of cutter height depending on the tractor being used. With the PTO shaft attached to the tractor, slowly raise and lower the cutter to upper and lower limits while observing clearance distance between hitch and PTO shaft. If an interference condition exists, it may be necessary to modify the drawbar height/length of the tractor.

**DANGER!**

Hydraulic fluid under pressure can penetrate skin. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for hydraulic leaks. If hydraulic fluid is injected into the skin, it must be surgically removed within a few hours by a doctor or gangrene may result.

Section 2 Operating Instructions

Section 2 Operating Instructions

Operating Check List

In addition to design and configuration of equipment; hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training involved in its operation, transport, maintenance and storage of equipment. Before beginning to operate your Cutter, the following inspection should be performed.

Check	Reference
<input type="checkbox"/> Read and follow the "Safety Rules" carefully.	Section 1 page 1
<input type="checkbox"/> Read all of the "Tractor Hook Up" and preparation instructions.	Section 1 page 10
<input type="checkbox"/> "Operating Instructions" in this Manual	Section 2 page 12
<input type="checkbox"/> Lubricate the cutter as needed. Refer to "Lubrication"	Section 5 page 19
<input type="checkbox"/> Check the cutter initially and periodically for loose bolts & pins, "Torque Values Chart".	Section 6 page 24
<input type="checkbox"/> Make sure all guards and shields are in place.	Section 1 page 3
<input type="checkbox"/> Gearbox Gear Lube	Section 5 page 20

WARNING!

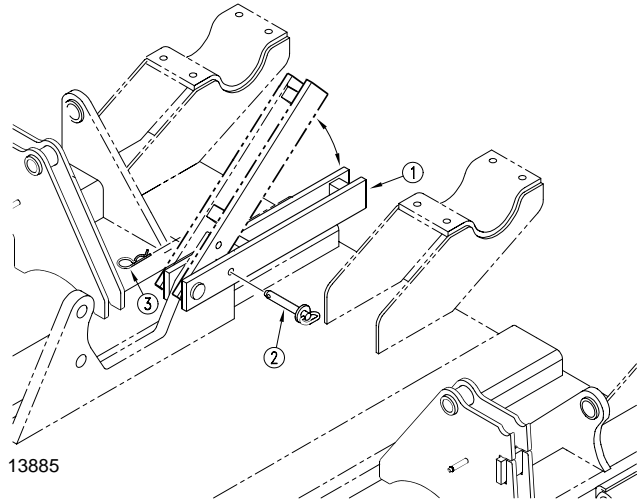
The following operating procedures should be carried out by the tractor operator. Other persons should be cleared of the area even during cutter setup. cutter operation should be stopped when in the vicinity of other persons.

Refer to Figure 2-1:

1. Raise the center deck to sufficient height to disengage the transport link (#1) . Remove the transport link pin (#2), lower the link arm, then replace the link pin to the storage position.

NOTE: The center deck height is controlled with the standard ratchet jack or the optional hydraulic lift cylinder.

2. Inspect the wing blade carriers and blades prior to lowering the wings. The wing deck blades may become locked together (overlapped) when the wings are raised to transport position. Operating the cutter under such circumstances will result in severe deck vibration. Inspect the wing decks for a locked blade condition prior to power-on operation. Use a pry bar or other tool to separate the blades if necessary.
3. The automatic wing latches on each wing must be released prior to lowering the wings. If the wing latch handles cannot be moved, it may be necessary to raise the wings to the fully closed position. Release wing latch and then lower the wings to full-down position.



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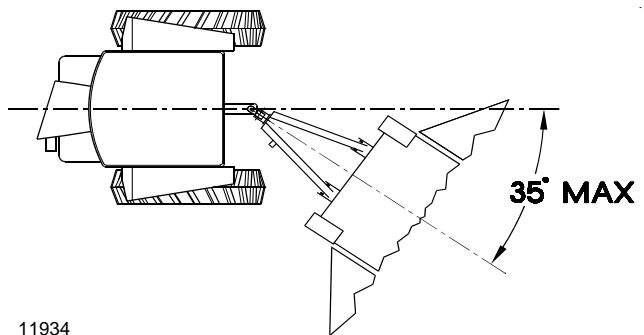
Transport Link
Figure 2-1

4. Increase throttle to approximately 500 RPM and slowly engage PTO. Ensure that all power shafts are rotating and that cutter has no vibration.
5. Continue to increase throttle to full PTO speed before commencing forward operation.

Refer to Figure 2-2:

Optimum Ground speed depends on the density of the material being cut, the horsepower rating of the tractor, and (in some cases) terrain.

If the cutter-to-tractor PTO is a standard conventional shaft, avoid tractor-to-cutter turning angles exceeding 35°. If equipped with a Constant Velocity PTO shaft, the turning angle may be increased to 80°. These extreme angles are intended for intermittent usage only and not prolong usage. Plan your field cutting to minimize the number of turns as well as the extreme angles where turns are necessary.



11934

Conventional U-Joint PTO
Figure 2-2

Section 2 Operating Instructions

This cutter was designed to cut grass and medium to heavy brush in pastures, right-of-ways, and certain ditch/terrace areas. This cutter is also useful for heavy row crop cutting. Avoid areas where small trees or brush diameters exceed 2". Do not attempt to operate this cutter in areas where rocks, steel, glass, concrete, wire, or other hard, foreign objects may be present.

! WARNING!

Do not operate this cutter under any terrain conditions where the wing angle exceeds 45° up. Ensure that the wing wheels are in continuous ground contact at all times. Use the float position of your tractors hydraulic system to provide automatic wing float position for varying terrain conditions.

Transporting

! DANGER!

Rotary Cutters have the ability to discharge objects at high speeds; do not operate this cutter along highways, roadways or other areas where people may be present unless approved guarding has been installed and properly maintained. Factory approved guarding includes front and rear safety chain, deflector skirts or other shields. Contact your dealer or call Great Plains Manufacturing, Inc. for the name of your nearest factory authorized dealer.

! CAUTION!

When traveling on public roads whether at night or during the day, use accessory light and devices for adequate warning to operators of other vehicles. Comply with all federal, state and local laws.

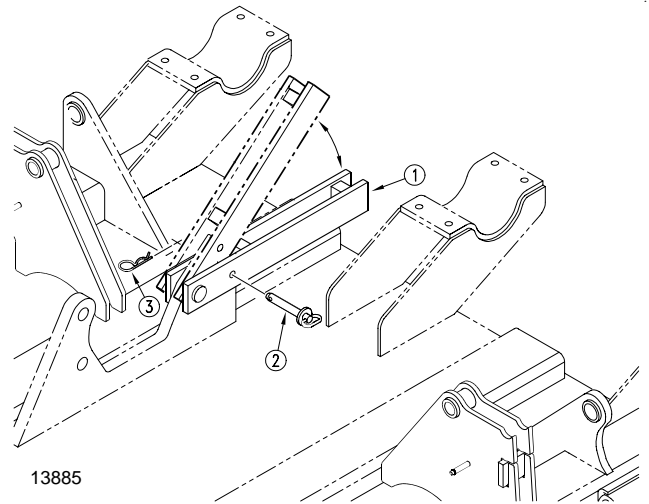
! CAUTION!

Always disengage tractor PTO before transporting cutter to avoid injury from thrown objects or blade contact.

1. Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
2. Reduce tractor ground speed when turning. Leave enough clearance so the cutter does not contact obstacles such as buildings, trees or fences.
3. When traveling over rough or hilly terrain, shift tractor to a lower gear.
4. Raise cutter to transport position using the hydraulic lift or ratchet jack. **Careful:** When raising to transport position, be certain that PTO shaft does not contact tractor or cutter tongue.
5. Raise both wings to 85° vertical position. The automatic wing latches should engage. Check to be sure they are fully latched.

Refer to Figure 2-3:

6. Engage transport lock (#1) by removing lock pin (#2) and rotating transport lock to 45° position. Insert lock pin through detent notch and secure with hair pin cotter (#3).
7. Slowly lower the cutter until transport lug of axle weldment contacts transport lock block.
8. Reduce tractor ground speed when turning; be sure tractor wheel does not contact cutter when turning. Leave clearance so cutter does not contact obstacles such as buildings, trees or fences.
9. The cutter should be transported no faster than **15 mph** when equipped with **laminated or solid tires**, and **30 mph** when equipped with **pneumatic tires**.



Transport Link Operation
Figure 2-3

! CAUTION!

The cutter is 8' 9" wide and care should be taken when encountering oncoming traffic and roadside obstructions.

Parking

The following steps should be done when preparing to store the cutter or unhitch it from the tractor. See also "Storage", on page 18 for additional information on long term storage of your cutter.

1. Park the cutter on a level, solid area.
2. Shut off tractor engine and engage parking brake.
3. Install jack & crank up the jack until it is supporting the unit.
4. Unhitch from tractor.

Section 3 Adjustments

Section 3 Adjustments

Center Deck Level Adjustments

These adjustments should be made with the cutter hooked up to the same tractor that will be used for field operations or one having the same drawbar height.

CAUTION!

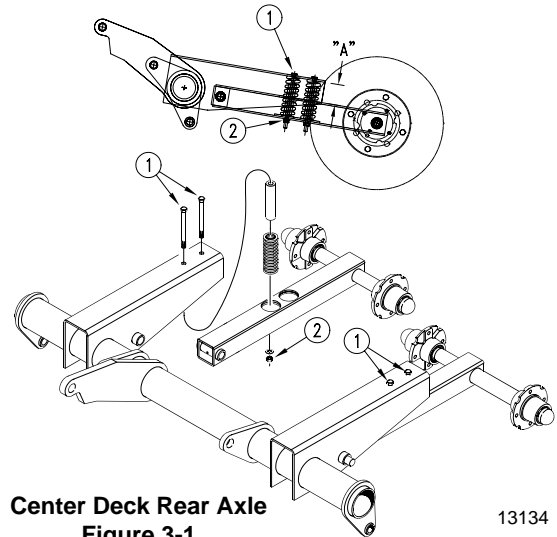
Engage parking brake, shut off tractor, remove key and disengage PTO before making any height adjustments!

Center Deck Rear Axle Arms Bolt & Nut Adjustment

NOTE: Cutter is to be set up on level ground with the wings folded up and in the locked position.

Refer to Figure 3-1:

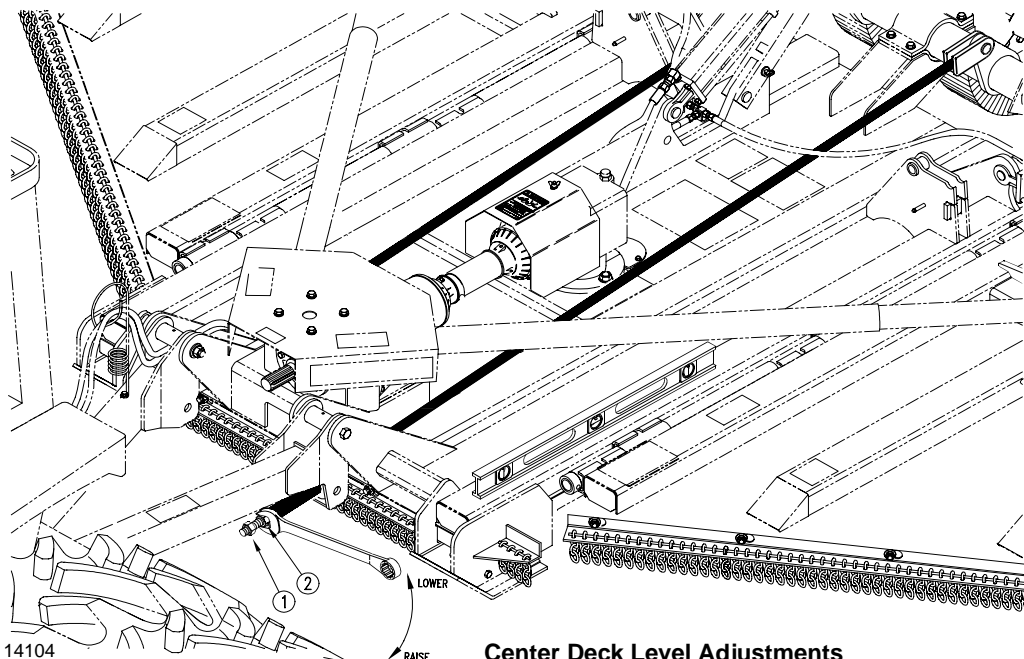
1. Tighten all four bolts (#1) until the nuts (#2) bottom out on the bolts (this is to loosen springs up) then loosen all 4-bolts until all the nuts are loose.
2. Measure the distance "A" on both center axle arm tubes to axle channel.
3. On the side with the shortest "A" Measurement, tighten nuts up until they are just snug against the axle tube!
4. Adjust the other axle assembly (with the longest "A" measurement), by tightening the nuts (#2), until it's "A" measurement is the same as the previous axle assembly (with the shortest "A" measurement).



Refer to Figure 3-2:

With the cutter positioned on level ground, the deck should be adjusted to a level position for the drawbar height of the tractor being used.

1. Raise both wings to latched position. Adjust the height of the center deck to 2-3 inch clearance between the front skids and ground surface.
2. Place a level anywhere on a center deck channel. It should be oriented for front-to-rear readings.
3. Loosen hex nut (#1) on level rod and turn the leveling tube weldment (#2) clockwise to raise the front of the



Section 3 Adjustments

cutter or counterclockwise to lower. Continue to adjust until the deck is level or the front is slightly below level. Both leveling rods should be adjusted to equal lengths.

4. Tighten jam nut (#1) to secure leveling rods.
5. This setting should not require further adjustment unless the drawbar height is changed or different size tires are used.
6. The cutting height can be adjusted by extending or retracting the hydraulic cylinder or ratchet jack located at the rear center of the cutter.

Wing Deck Level Adjustments

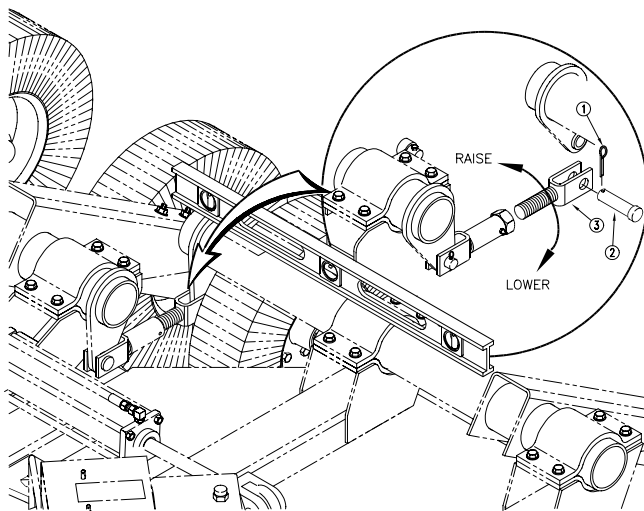
IMPORTANT: Ensure that Center Deck Level Adjustments have been made before proceeding with wing deck level adjustments.

CAUTION!

Engage parking brake, shut off tractor, remove key and disengage PTO before making any height adjustments!

Refer to Figure 3-3:

1. Lower both wings to full down position.
2. Place a level on the wing axle rockshaft to determine initial up or down position (left/right).
3. Raise the wing to full vertical position.
4. Remove the cotter pin (#1) and clevis pin (#2), from the back end of the axle link (#3). The axle link is then shortened to raise the wing or lengthened to lower the wing. Shorten the axle link by rotating the clevis end clockwise or lengthen by turning counterclockwise. Reattach to the rockshaft lug.



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**Wing Deck Level Adjustments
Figure 3-3**

5. Repeat steps 1 through 4 until axle rockshaft is at level position.
6. Reattach clevis to rockshaft lug and secure with clevis pin and cotter pin.

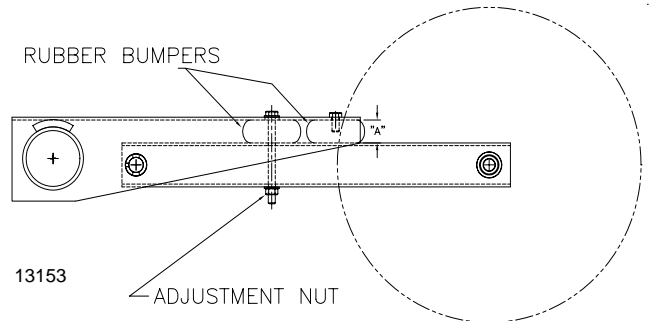
**Wing Deck Tailwheel
Rubber Bumper Adjustment**

Refer to Figure 3-4:

NOTE: Cutter to be adjusted on level ground

The tailwheel adjustment nut, Figure 3-4, is to be adjusted with wings down and in level position. (Weight of cutter will set the rubber bumpers). Snug nut up, plus one additional turn. Bumpers are then set for optimal cushioning condition!

NOTE: Bumpers will need to be checked periodically for over-compression. When dimension "A" gets to 1", the cushions should both be replaced. Bumper part number is 312-313D



**Wing Deck Tail Bumper
Figure 3-4**

Section 4 Troubleshooting

Section 4 *Troubleshooting*

Problem	Solution
Oil seal leaking	Drain to level fill hole
	Replace seals
	Clean off wrapped material and check seal areas daily
Power Take Off yoke or shock cross failing	Avoid hitting solid objects
	Lubricate every 10 hours
Slip Clutches slip even with a light load	Replace clutch plates
	Remove foreign object
Bent Power Take Off shaft {Note: Power Take Off shaft should be repaired or replaced if bent}	Reduce lift height in transport position
	Reposition drawbar
	Shorten Power Take Off shaft
Power Take Off shaft telescoping tube failing	Avoid hitting solid objects
Power Take Off shaft telescoping tube wearing	Lubricate every 50 hours of operation
Blades wearing excessively	Raise cutting height
Blades coming loose	Tighten blade hardware {refer to “ Service Cutting Blades ” on page 17}
Blades breaking	Avoid solid objects
Loose blade carrier	Replace gearbox bearings and / or shaft
	Tighten shaft nut to specified torque
Blade carrier bent	Avoid hitting solid objects
Excessive side skid wear	Adjust cutter height
	Raise cutting height
Excessive vibration	Replace Power Take Off or distribution shaft
	Replace blade carrier
	Replace blade
	Inspect and unlock blades
	Disassemble and inspect for incorrectly located needles or damaged bearing cap
	Replace each pair of blades on affected carrier
Wing cylinder movement too slow	Remove elbow fitting and remove orifice

Section 5 Maintenance and Lubrication

Section 5 Maintenance and Lubrication

Maintenance

Proper servicing and adjustment is the key to the long life of any farm implement. With careful and systematic inspection, you can avoid costly maintenance, time and repair.

For safety reasons, each maintenance operation must be performed with tractor PTO disengaged, the cutter lowered completely to the ground or on safely supported blocking, tractor engine shut off and ignition key removed.

1. After using your cutter for several hours, check all bolts to be sure they are tight.
2. After transporting your cutter for several hours, check all wheel lugs, bolts and nuts to be sure they are tight. Always maintain proper air pressure in the tires.

NOTE: Check tightness of bolts periodically, using the "Torque Values Chart" on 24 as a guide.

Service Cutting Blades

1. Both blades on each dishpan should be sharpened at the same angle as the original cutting edge and must be replaced or reground at the same time to maintain proper balance in the cutting unit.

IMPORTANT: Replace blades with genuine Land Pride blades only. If one blade is to be replaced, the mating blade {on the same carrier} must also be replaced.

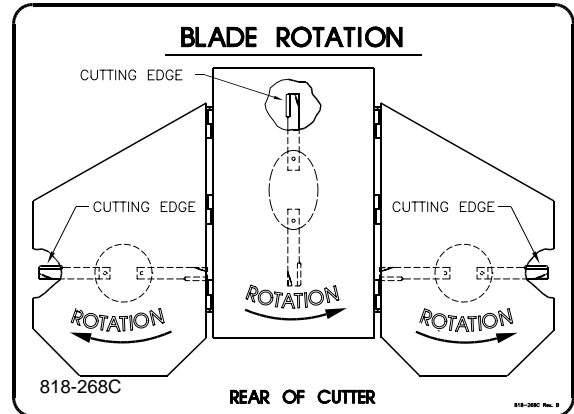
NOTE: **Do not** remove any more material than necessary when sharpening blades.

2. Both blades on each dishpan should weigh the same after sharpening.
3. When replacing or sharpening the cutter blades, examine bolts and hardware for excessive wear and replace if necessary.
 - a. Torque blade bolt lock nut to 450 ft. pounds. An extended cheater bar may be required to achieve proper torque.
 - b. Carefully check the cutting edges of the blades in relation to the blade carrier rotation diagram below to ensure correct blade placement.

**CAUTION!**

Installation of the longer blades on the wing decks will cause an immediate operating hazard.

NOTE: Blades for the wings & center deck are 25" long, Note rotation as shown in Figure 5-1.



Blade Rotation
Figure 5-1

4. Blade Dishpan Replacement:

Dishpan nut on gearbox output shafts should be torqued to 450 foot/pounds and cotter pin installed in nut with legs securely bent around nut.

Skid Shoe Service & Replacement

The center deck skid shoes should be checked periodically for wear and replaced as necessary. Order center deck skid shoe Land Pride part #312-218H. No adjustment is required.

**CAUTION!**

Skid shoe replacement must be done with the deck raised to the transport position and securely blocked. Engage parking brake, shut off tractor, remove key and disengage PTO before adjusting or replacing these parts.

**WARNING!**

Excessive wear on skids may cause inadequate operation of cutter and create a safety hazard!

The wing deck skid shoes should be checked periodically for wear. Excessive leading edge wear can be repaired by interchanging the LH wing skid with the RH wing skid. If both leading edges have been worn down, order skid shoe Land Pride part # 312-446H.

Skid Shoes

To replace center deck skid shoes:

Refer to Figure 5-2:

- a. Attach skid shoe to cutter, using four 1/2" bolts lock washers and hex nuts.
- b. Repeat for opposite skid shoe.

Section 5 Maintenance and Lubrication

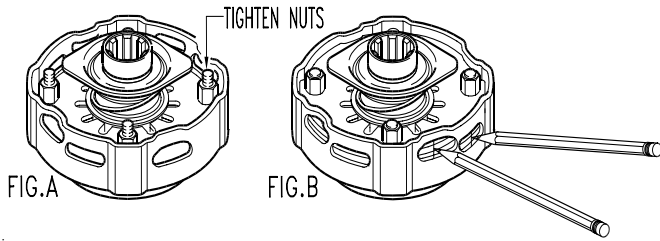
To replace wing deck shoes:

Refer to Figure 5-3:

- a. Attach skid shoe to cutter, using three 1/2" carriage bolts flat washers, lock washers and hex nuts.
- b. Repeat for opposite skid shoe.

Clutch Run-In

Refer to Figure 5-4:



Clutch Run-In
Figure 5-4 10103

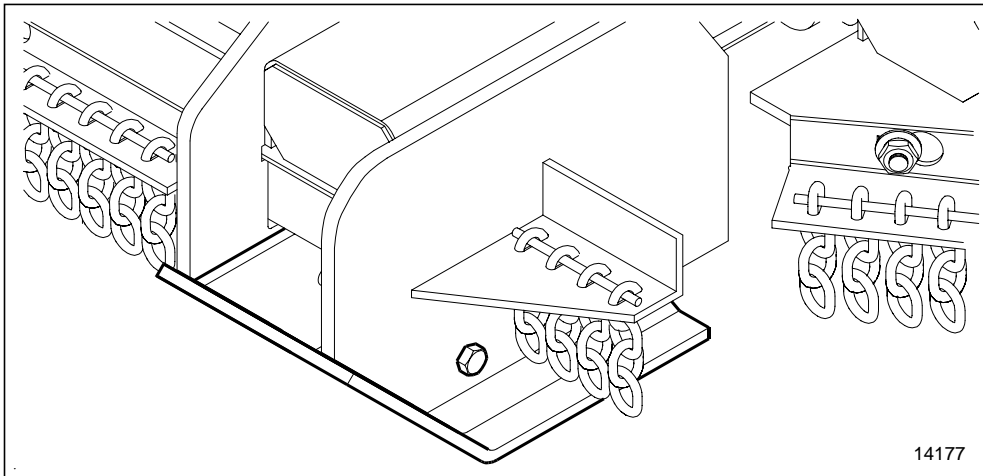
The clutch should slip during operation to protect the cutter from excessive loads.

Prior to initial operation and after long periods of inactivity, the Friction Clutch should be "run-in".

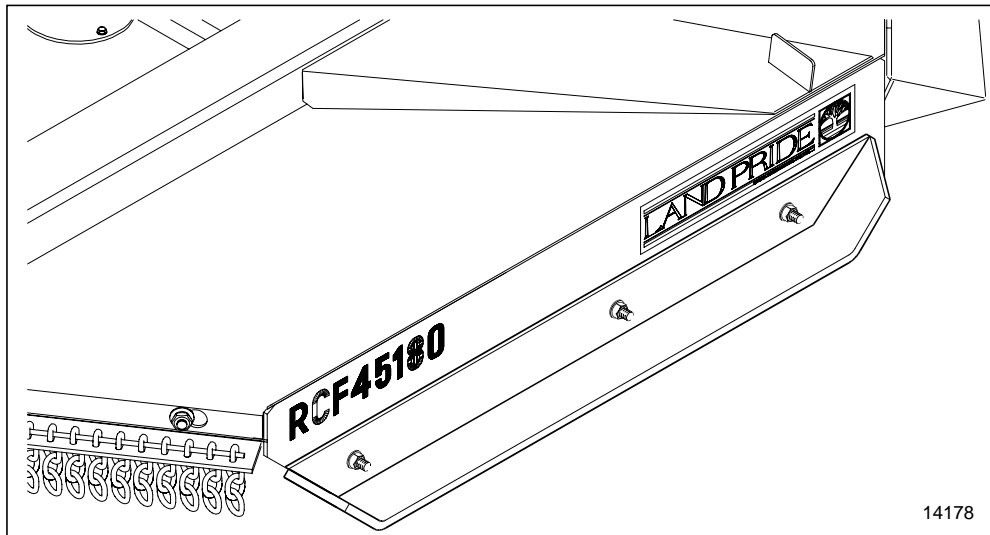
1. Tighten all 4 nuts uniformly until the spring load is low enough that the clutch slips freely with the PTO engaged.
2. Turn nuts fully back. Clutch is ready for use.

Storage

1. At the end of the working season or when the cutter will not be used for a long period, it is good practice to clean off any dirt or grease that may have accumulated on the cutter and any of the moving parts. It may be necessary to scrape off compacted dirt from the bottom of the deck, then use a garden hose to thoroughly clean the surface.
2. Check the blades for wear and replace if necessary. See "Maintenance & Lubrication".
3. Inspect the cutter for loose, damaged or worn parts and adjust or replace if needed.
4. Lubricate as noted in "Maintenance & Lubrication" beginning on page 19.
5. Repaint parts where paint is worn or scratched to prevent rust. Aerosol Buckskin touch-up paint is available from your dealer. Order Land Pride part #821-011C.
6. Replace all damaged or missing decals.
7. Store the cutter inside if possible. Inside storage will reduce maintenance and make for a longer cutter life.



Center Deck Skid Shoe
Figure 5-2







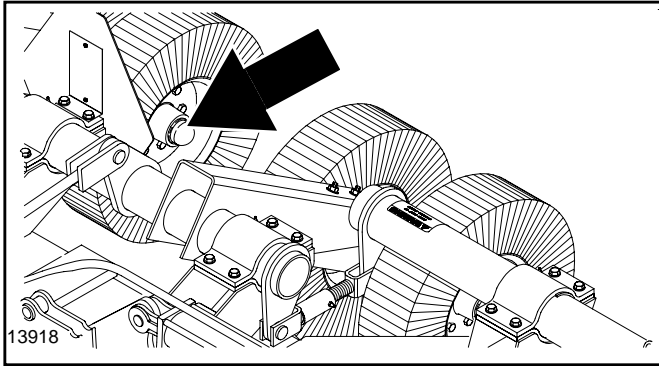
Wing Deck Skid Shoe
Figure 5-3



Section 5 Maintenance and Lubrication

Lubrication

Lubrication Legend

	Multipurpose spray lube		Multipurpose grease lube		Multipurpose oil lube		Intervals at which lubrication is required
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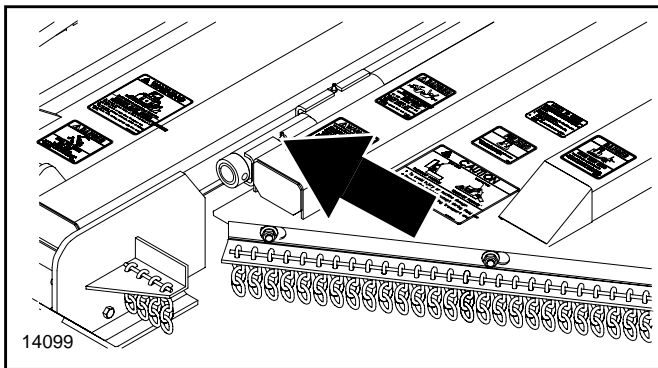
Axle Hub Bearing



Repack wheel bearings

Type of Lubrication: Wheel Bearing Grease

Quantity = Coat Generously

NOTE: The tailwheel hub is equipped with a relief hole located directly opposite the grease fitting. The relief hole releases pressure from inside the hub casting when it is greased. The hub should be greased until grease purges from the relief hole.

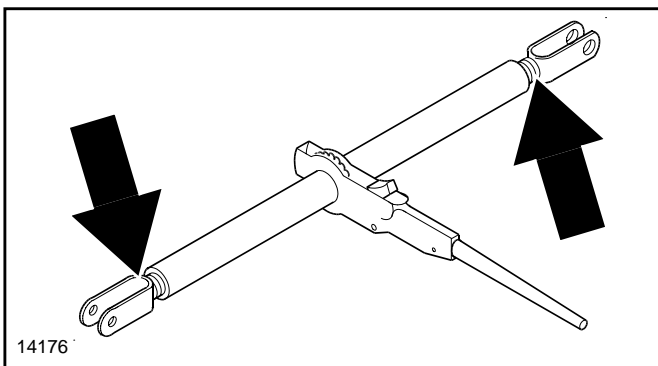



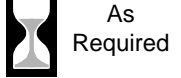
	
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Wing Hinges (6)

Type of Lubrication: Multi-Purpose

Quantity = As required



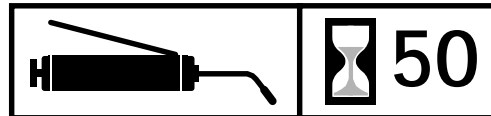
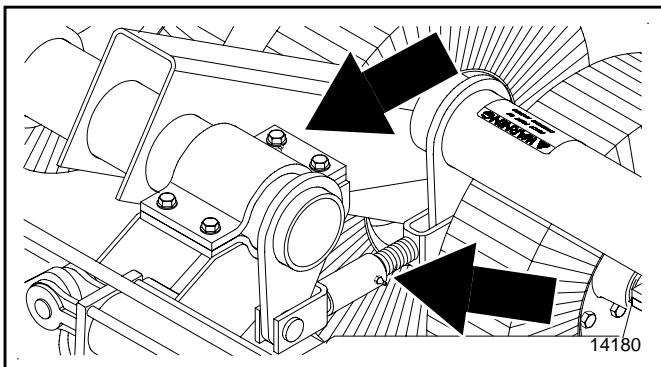
	
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Ratchet Jack

Type of Lubrication: Multi-Purpose

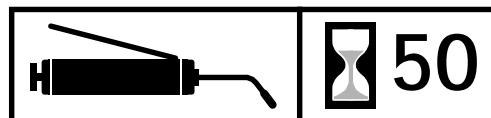
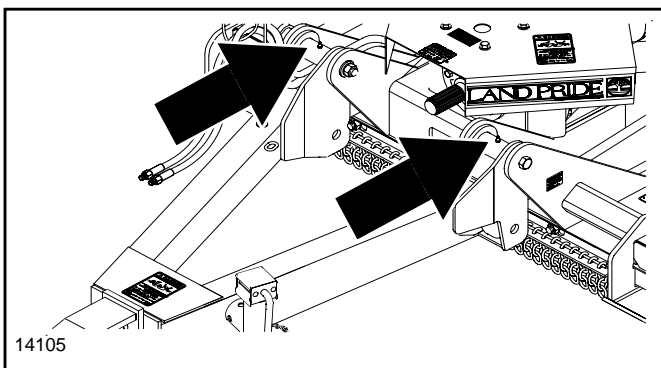
Quantity = As required

Section 5 Maintenance and Lubrication



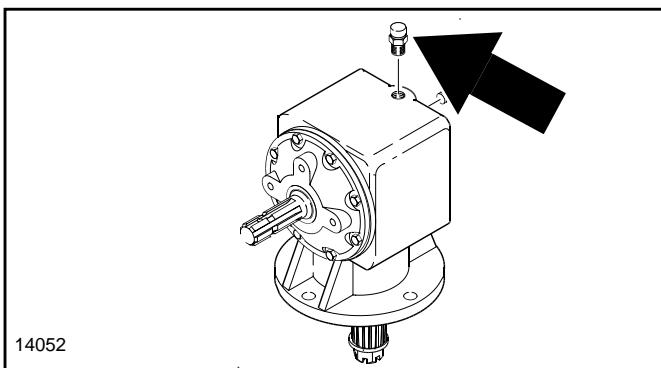
Axle Rockshaft & Axle Link

Type of Lubrication: Multi-Purpose
Quantity = As required



Main Hitch

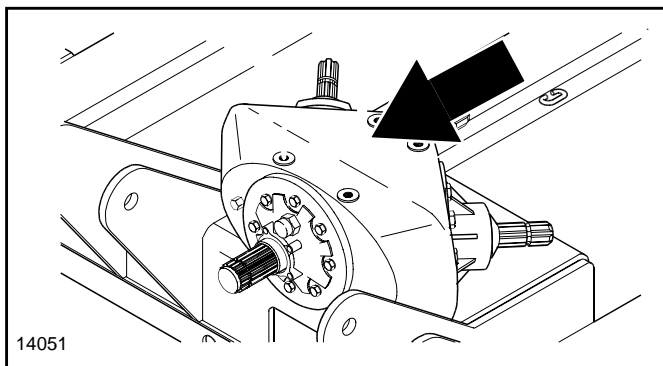
Type of Lubrication: Multi-Purpose
Quantity = As required



Gearbox

Type of Lubrication: 80-90W EP
Quantity = As required

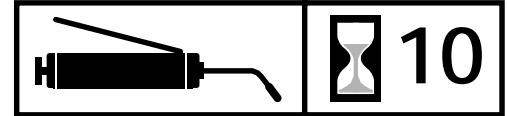
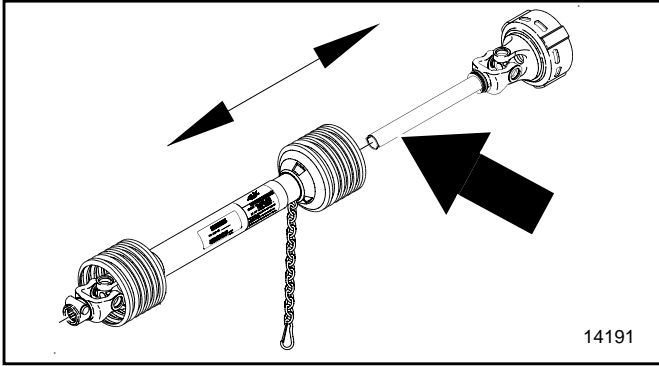
NOTE: **Do not** overfill! Cutter should be level when checking oil. If, for any reason, all oil has been removed from gearbox, refill to level plug and allow air to bleed up from lower cavity, then recheck.



Divider Box

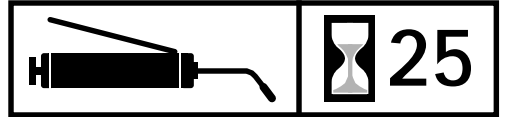
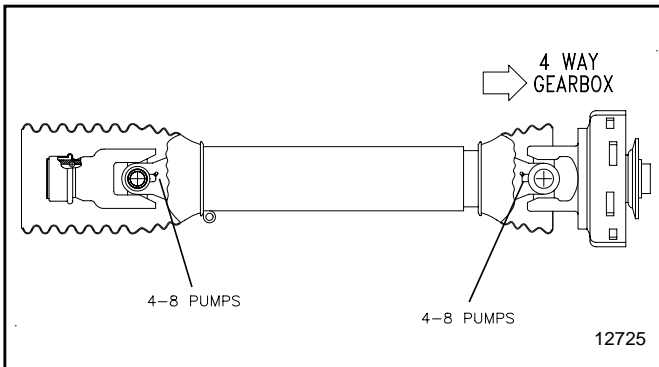
Type of Lubrication: 80-90W EP
Quantity = As required

Section 5 Maintenance and Lubrication



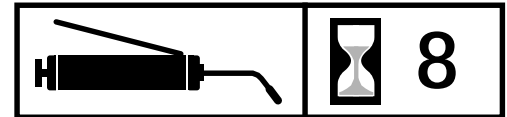
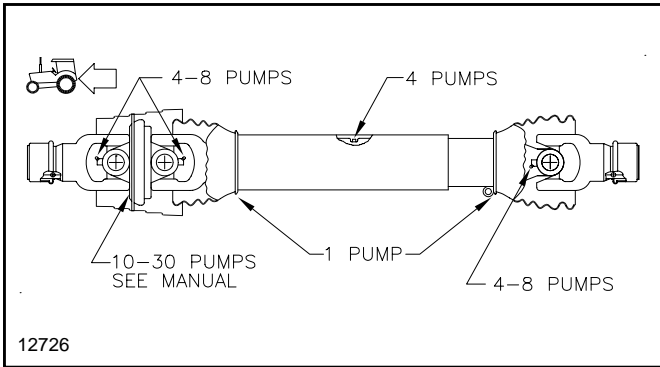
Driveline Shaft

Type of Lubrication: Multi Purpose
Quantity = Coat Generously



Drive line Shafts

Type of Lubrication: Multipurpose Grease



PTO Constant Velocity Shaft

Type of Lubrication: Multipurpose Grease

NOTE: To extend the life of the constant velocity joint, extensive lubrication must be performed every 8 hours of operation!

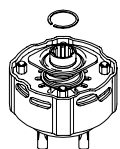
- a. The constant velocity joint should be greased in a straight position forcing grease through the passages and into the cavity. After lubrication, grease should be visible around the ball joints.
- b. The constant velocity driveline comes equipped with a grease zerk in the outer telescoping member and must be greased every 8 hours to prevent premature failure of the joint.
- c. Grease fittings are located on the u-joints and driveline shields and should be lubricated every 8 hours of operation.

Section 5 Maintenance and Lubrication

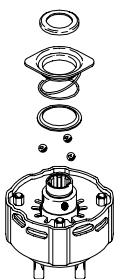
4-Plate Slip Clutch

NOTE: Before proceeding, secure the clutch firmly in a vise or other clamping device to prevent injury.

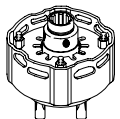
Disassembly



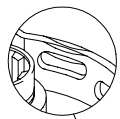
◀ **Step 1**
Remove snap ring.



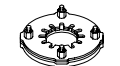
◀ **Step 2**
Remove backup ring, lock collar, compression spring, bottom backup ring, and balls.



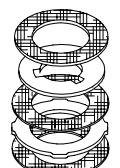
◀ **Step 3**
Tighten the four hex nuts uniformly until the clutch pack and hub are loose.



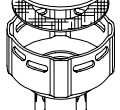
◀ **Step 4**
Bend all four retaining lugs out on the edge of the clutch housing.



◀ **Step 5**
Remove the thrust plate with the Belleville Springs and lug rings to access friction disks and hub for inspection or service.

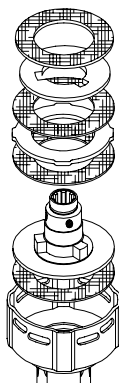


◀ **Step 6**
Inspect friction disks and hub.

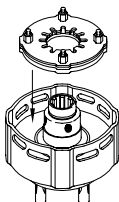


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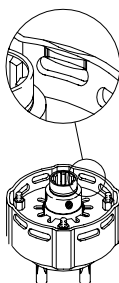
Assembly



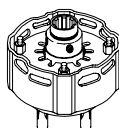
◀ **Step 1**
Place the hub and friction disks into the housing.



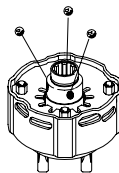
◀ **Step 2**
Compress the Belleville Springs to the pressure plate by tightening the four hex nuts and then placing the assembly into the clutch housing.



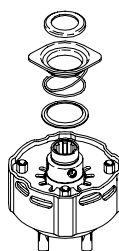
◀ **Step 3**
Bend the retaining lugs inward over the Belleville Spring edges to secure the spring before backing the four hex nuts off.



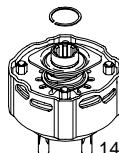
◀ **Step 4**
With the lugs bent in, loosen the four hex nuts completely to the end of the threaded studs.



◀ **Step 5**
Insert greased balls.



◀ **Step 6**
Install bottom backup ring, compression spring, lock collar, and top backup ring.



◀ **Step 7**
Install snap ring.

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Section 6 Specifications and Capacities




RC45180 & RCM45180 Rotary Cutter																						
Cutting Width	180"																					
Overall Width	190"																					
Minimum Transport Width	96"																					
Cutting Height	2" - 14"																					
Overall Length	204"																					
Deck Material Thickness	10 gauge																					
Deck Height	10"																					
Hitch Type	Pull Self - Leveling																					
Blades - 6 (2 per Carrier)	1/2" x 4" Heat Alloy Steel Free Swinging High Lift Low Friction																					
Blade Tip Speed	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 30%;">FPM</th> <th style="width: 30%;">RPM</th> </tr> </thead> <tbody> <tr> <td>540 RPM PTO:</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Center Blade</td> <td>14,853</td> <td>788</td> </tr> <tr> <td style="padding-left: 20px;">Wing Blade</td> <td>14,112</td> <td>907</td> </tr> <tr> <td>1000 RPM PTO:</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Center Blade</td> <td>15,569</td> <td>826</td> </tr> <tr> <td style="padding-left: 20px;">Wing Blade</td> <td>14,486</td> <td>930</td> </tr> </tbody> </table>		FPM	RPM	540 RPM PTO:			Center Blade	14,853	788	Wing Blade	14,112	907	1000 RPM PTO:			Center Blade	15,569	826	Wing Blade	14,486	930
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Blade Holders	Center: 3/16" x 27" Oval Pan Wing: 3/16" x 15" Round Pan																					
PTO Drive Shafts	540 PTO: ASAE Category 5 {Input Shafts} ASAE Category 4 {Output Shafts} 1,000 PTO: ASAE Category 4 {Input / Output}																					
Driveline Slippage Protection	Dual plate Belleville type slip clutches on each blade gearbox																					
Power Divider	<p>540 RPM: PTO Driven 1:1.15 Speed-Up Tapered Roller Bearings, Beveled Gears Cast Iron Housing, 125 Horse Power</p> <p>1000 RPM: PTO Driven 1.3:1 Reduction Tapered Roller Bearings, Beveled Gears Cast Iron Housing, 180 Horse Power</p>																					
Gear Boxes	<p>540 RPM: PTO Driven 1:1.46 Speed-Up Tapered Roller Bearings, Beveled Gears Cast Iron Housing, 75 Horse Power</p> <p>1000 RPM: {wings} PTO Driven 1:1.21 Speed-Up; {center} 1.21:1 Reduction Tapered Roller Bearings, Beveled Gears Cast Iron Housing, 75 Horse Power</p>																					
Tailwheel - Pull Type	6.00 x 9 x 21 Laminated or 5 x 15 Rim only or 21" Solid Core or 25.5 x 8.0-14 18 Ply-tube-type																					
Shock Load Suspension	Four Compression type springs on center wheels Four Rubber Bumper cushions on wing wheels																					
Machine Weight (With front / rear chain guards)	4,400 lbs.																					
Tongue Weight	1,600 lbs.																					
Recommended PTO Horse Power	50 - 150																					

Section 7 Appendix

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Torque Values Chart for Common Bolt Sizes

Bolt Size (Inches)	Bolt Head Identification					
						
	Grade 2		Grade 5		Grade 8	
in-tpi ¹	N · m ²	ft-lb ³	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12
1/4" - 28	8.5	6	13	10	18	14
5/16" - 18	15	11	24	17	33	25
5/16" - 24	17	13	26	19	37	27
3/8" - 16	27	20	42	31	59	44
3/8" - 24	31	22	47	35	67	49
7/16" - 14	43	32	67	49	95	70
7/16" - 20	49	36	75	55	105	78
1/2" - 13	66	49	105	76	145	105
1/2" - 20	75	55	115	85	165	120
9/16" - 12	95	70	150	110	210	155
9/16" - 18	105	79	165	120	235	170
5/8" - 11	130	97	205	150	285	210
5/8" - 18	150	110	230	170	325	240
3/4" - 10	235	170	360	265	510	375
3/4" - 16	260	190	405	295	570	420
7/8" - 9	225	165	585	430	820	605
7/8" - 14	250	185	640	475	905	670
1" - 8	340	250	875	645	1230	910
1" - 12	370	275	955	705	1350	995
1-1/8" - 7	480	355	1080	795	1750	1290
1 1/8" - 12	540	395	1210	890	1960	1440
1 1/4" - 7	680	500	1520	1120	2460	1820
1 1/4" - 12	750	555	1680	1240	2730	2010
1 3/8" - 6	890	655	1990	1470	3230	2380
1 3/8" - 12	1010	745	2270	1670	3680	2710
1 1/2" - 6	1180	870	2640	1950	4290	3160
1 1/2" - 12	1330	980	2970	2190	4820	3560

Bolt Size (Metric)	Bolt Head Identification					
						
	Class 5.8		Class 8.8		Class 10.9	
mm x pitch ⁴	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

¹ in-tpi = nominal thread dia .in inches-threads per inch

² N · m = newton-meters

³ ft-lb= foot pounds

⁴ mm x pitch = nominal thread dia. in millimeters x thread pitch

Tire Inflation Chart

Tire Size	Inflation PSI
25.5 x 8.0" - 14	35



Warranty

Land Pride warrants to the original purchaser that this Land Pride product will be free from defects in material and workmanship for a period of one year, from the date of delivery to the end user, when used as intended and under normal service and conditions for personal use; and 6 months for municipalities, golf courses, sod farms and rental purposes. This Warranty is limited to the replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part, and does not cover common wear items such as blades, belts, tines, etc. Land Pride reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Land Pride's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this Warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. Land Pride reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Land Pride liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with Land Pride within 30 days from the date of delivery to the end user.



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